

**REMARKS**

This application has been carefully reviewed in light of the Office Action mailed July 12, 2004. Claims 1-24 are pending in the Application. Applicant respectfully requests reconsideration and favorable action of all pending claims in view of the following remarks.

**Allowable Subject Matter**

Applicant appreciates the indication in the Office Action that Claims 1-9 and 19-24 are allowed and that Claims 13-18 would be allowable if rewritten in independent form. Because Applicant believes Claim 10 is allowable, Applicant has not rewritten Claims 13-18 in independent form.

**Rejections Under 35 U.S.C. § 102**

The Office Action rejects Claim 10 under 35 U.S.C. § 102(b) as being anticipated over U.S. Patent No. 5,889,487 to Burns et al. ("*Burns*"). Applicant respectfully traverses this rejection for the reasons discussed below. Claim 10 recites in part "a second portion having a sampling portion with a sampling input for receiving a signal to be sampled, said sampling portion responding to said quantum jump in magnitude of said electrical signal characteristic from said first value to said second value by causing said sampling portion to sample a signal at said sampling input during a time period which is approximately equal in duration to said interval of time." *Burns* fails to disclose such a limitation, and the Office Action does not even assert that such a limitation is disclosed in *Burns*. Rather, *Burns* involves the use of a resonant tunneling diode in a latch device, but does not appear to disclose a sampling portion that samples a signal during the time of the quantum jump of the resonant tunneling device. According to *Burns* after the voltage jumps from  $V_p$  to  $V_1$ , a hysteresis element causes the voltage to drop down to  $V_2$  within the "latched region." However, *Burns* does not disclose the claimed sampling portion, nor does the Office Action assert it does. Rather, in rejecting this claim the Office Action refers to FIGURE 5 of *Burns*, which merely shows the above-described use of a tunneling diode in a latch, but does not show the claimed sampling portion. For at least this reason, Claim 10 is allowable, as are the claims depending therefrom. Favorable action is requested.

Claim 11 was rejected on the Office Action Summary page but was never mentioned in the body of the Office Action. Applicant respectfully traverses this rejection. In addition

to depending from allowable independent Claim 10, Claim 11 is also allowable because *Burns* does not teach or suggest “wherein said second portion includes a differentiator which responds to said quantum jump of said electrical signal characteristic from said first value to said second value by producing a narrow pulse having a duration which is approximately equal to said interval of time, said sampling portion effecting said sampling in response to and during said narrow pulse from said differentiator.” The Office Action does not even attempt to identify a disclosure of this limitation in *Burns*; it cannot because there is no such disclosure. For this additional reason, Claim 11 is allowable. Favorable action is requested.

**CONCLUSION**

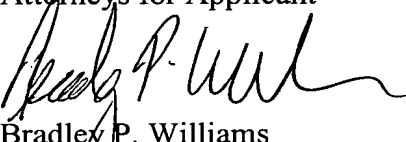
Applicant has now made an earnest attempt to place this case in condition for immediate allowance. For the foregoing reasons and for other apparent reasons, Applicant respectfully requests of all pending claims

If the Examiner feels that prosecution of the present Application may be advanced in any way by a telephone conference, the Examiner is invited to contact the undersigned attorney at 214-953-6447.

Applicant does not believe that any fees are due. However, the Commissioner is hereby authorized to charge these fees and any extra fee or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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